

Application No.: 10/674,022

Amendment dated: 09/20/06

Reply to Office Action mailed: 06/20/06

Remarks/Arguments

The rejection of Applicants' claims 1-11 and 13-22 under 35 U.S.C. 102(e) as anticipated by the Bauer reference is respectfully traversed and reconsideration is respectfully requested.

Applicants have amended all of the pending claims so that all the compressed refrigerant for the light hydrocarbon gas liquefaction process is supplied by a compressor driven by a light hydrocarbon gas fired turbine or a plurality of compressors and turbines. This differentiates Applicants' claims from the Bauer claims in that a portion of the refrigerant is compressed in Bauer by the use of a steam turbine and electrical power, if generated by Bauer, is generated by a generator shaft coupled to the steam turbine and its driven compressor.

Applicants have also amended all claims to require that all resulting exhaust gas stream is passed to a heat exchanger and used to produce steam at an elevated temperature and pressure from the resulting exhaust gas stream.

Applicants' have also amended their claims to require that the steam turbine driven with the steam from the heat exchanger is unconnected mechanically to the light hydrocarbon gas fired turbine or refrigerant compressor.

It is believed that these amendments effectively distinguish Applicants' claims from the disclosure in Bauer, Figure 5. It is submitted that this process is not shown and further it is also not obvious from the disclosure in Bauer, which apparently requires a shaft-mounted generator which may recover power from the steam driven turbine if excess power is produced. By contrast, Applicants' process uses gas fired turbines to produce the power to compress all refrigerant required for use in the light hydrocarbon gas liquefaction process. Applicants use no steam turbines to produce compression power for the refrigerant required for the process.

Application No.: 10/674,022

Amendment dated: 09/20/06


Reply to Office Action mailed: 06/20/06

Applicants, however, pass all of the exhaust gas stream from the turbine to a heat exchanger to produce steam used to drive a steam turbine which is unconnected mechanically to the light hydrocarbon gas fired turbine or the refrigerant compressor to produce electricity for use in the light hydrocarbon gas liquefaction process. As previously noted this process is more efficient and produces less carbon dioxide than other comparable processes, as described in Applicants' specification.

Claims 9 and 19 have been amended to recite that the carbon dioxide emissions for the light hydrocarbon gas liquefaction process are reduced by at least 35 percent by comparison to other processes where the electrical power is produced by fossil fuel combustion.

It is believed in view of the foregoing amendments and comments that Applicants' claims are now in condition for allowance and such is respectfully solicited.

Respectfully submitted,


F. Lindsey Scott
Registration No. 26,230
972.599.2888
Attorney for Applicants

2329 Coit Road
Suite B
Plano, TX 75075-3796